

U.S. Serial No.: 09/493,677

APPENDIXIN THE CLAIMS

Please amend claim 15 and add new claims 30-33 as follows:

15. (Four Times Amended) A cooling apparatus comprising:

a heatsink comprising:

a) a column having a heat receiving face, wherein a cross section of said column has a shape whose sectional width decreases as it extends away from said heat receiving face; and

b) a plurality of pillar-type protrusions provided on at least one face other than the heat receiving face of said column in such a manner that they are parallel to or at a predetermined angle against the heat receiving face, wherein at least one continuous row of said pillar-type protrusions extend from said column at the same angle relative to said column, each of said pillar-type protrusions in said at least one continuous row extending from said column at the same vertical height; and

a cooling means mounted on said heatsink to provide a fluid flow between said plurality of pillar-type protrusions in a direction transverse to said heat receiving face.

30. (New) A heatsink comprising:

a) a column having a heat receiving face, wherein a cross section of said column decreases as it extends away from said heat receiving face; and

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b) a first plurality of pillar-type protrusions formed by a plurality of first cut slits formed on a face other than the heat receiving face of said column, and a plurality of cross slits formed transversely to said first cut slits, said first plurality of pillar-type protrusions defining a first fluid flow section;

c) a second plurality of pillar-type protrusions formed by a plurality of second cut slits formed on another face of said column, and a plurality of second cross slits formed transversely to said second cut slits, said second plurality of pillar-type protrusions defining a second fluid flow section,

wherein said first fluid flow section is connected to said second fluid flow section.

31. (New) The heatsink of claim 30, wherein the heat receiving face is spaced away from the nearest pillar-type protrusion.

32. (New) A heatsink comprising:

a) a column having a heat receiving face, wherein a cross section of said column has a shape whose sectional width decreases as it extends away from said heat receiving face; and

b) a plurality of pillar-type protrusions provided on at least one face other than the heat receiving face of said column in such a manner that they are parallel to or at a predetermined angle against the heat receiving face, said plurality of pillar-type protrusions being configured to form at least one uninterrupted fluid flow path between respective pillar-type protrusions in a direction in which the cross-sectional width of said column changes,